# 1506

# ERT Service Chart

# BAIRD 294

SIX-TRANSISTOR two-waveband portable receiver. Same basic circuit and printed panel used in models M266, M268, M270, M276, M278 and M294. In some versions a tone control is added, this is shown dotted in the circuit diagram.

**Battery.** Ever Ready PP9, Vidor VT9 or equivalent.

**Consumption.** Approximately 12mA quiescent.

**Wavebands.** MW 180-550m (1670-547kc/s), LW 1070-1870m (280-160kc/s).

**Transistors.** AF117 mixer-oscillator, AF117 first IF amplifier, AF117 second IF amplifier, OC81D audio driver, OC81 (2) push-pull output.

**Diodes.** OA79 AGC overload, OA90 detector.

**IF.** 470kc/s.

**Aerial.** Internal ferrite rod covering L and M waves. Provision for external car radio aerial.

**Speaker.** 4 × 4in. 8000 lines, 3ohms.

**Output.** 500mW.

**Outlet.** Socket for personal phone or tape recorder.

**Dimensions.** 9 × 5⅜ × 2⅛in.

**Price.** 12gns. including PT.

**Manufacturer.** Baird TV Distributors.

**Service department.** 414 Chiswick High Road, London W4. Tel.: Chiswick 8437. Also seven depots throughout UK.

## SERVICE NOTES

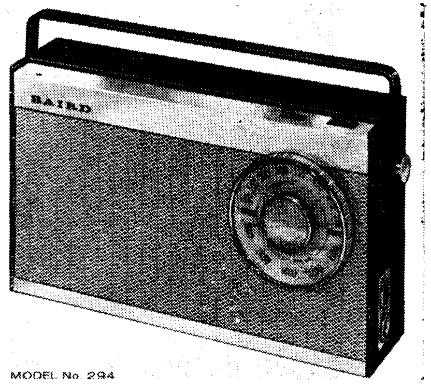
**Circuit diagram.** Car radio aerial coil L1 is not fitted in model M270. Portion of diagram shown dotted is tone control arrangement fitted only to certain models.

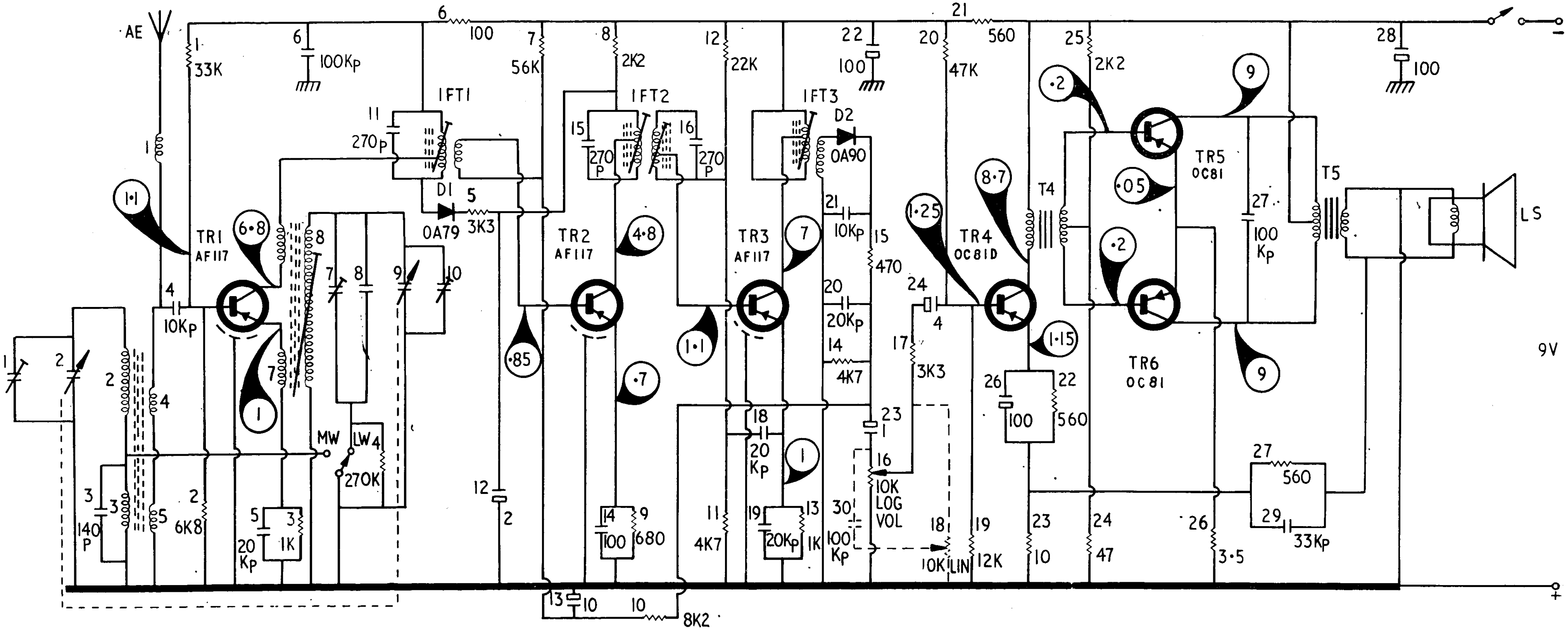
**Voltages.** Voltage readings are negative in respect to chassis and taken with Avo 8 or similar 20,000ohms/volt meter under no-signal conditions.

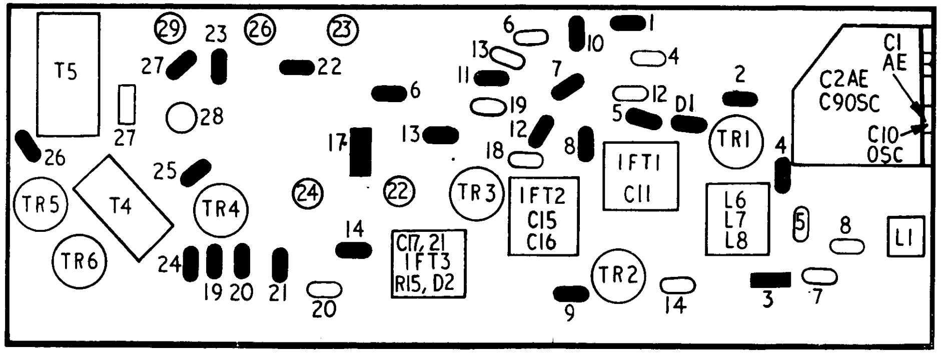
## ALIGNMENT

**Equipment required.** Modulated signal generator covering LW, MW and IF, output meter 3ohms, transmitting loop, insulated trimming tools.

**IF.** Set tuning gang to maximum capacity (fully meshed). Turn volume control to maximum. Switch to medium wave.







Layout of printed circuit panel viewed from component side

Connect generator output to transmitting coil or, if this not available, to car radio input socket. Connect output meter to secondary of output transformer in place of speaker.

Inject 470kc/s modulated signal and increase generator output until reading is obtained on output meter. As the circuits are aligned the generator output must be reduced to maintain a reading of not more than 50mW.

If this is not done, difficulty will be experienced in finding the tuning peaks due to the masking effect of AGC action. This will apply particularly to IFT1 which is damped by the conduction of diode D1 on strong signals.

Adjust IFT3 for maximum output. If more than one position is found giving a peak choose the one farthest from the printed board. Adjust the bottom core of IFT2 for maximum output. Adjust the top core of IFT2 for maximum output. Adjust the core of IFT1 for maximum output. Repeat the alignment of all IF transformers until no further improvements result.

**RF MW.** Switch to MW. Turn volume control to maximum. Connect output meter in place of speaker across output transformer. Reduce output from generator as circuits are aligned to maintain meter reading at 50mW.

Set receiver pointer to 500m (26 degrees). Inject modulated signal at 600kc/s via transmitting coil or car aerial socket. Tune the core of oscillator coil L6/L7/L8 until the signal is obtained. This can be checked by switching off the generator temporarily and observing reading on the output meter.

Retune receiver pointer to 200m (154 degrees). Set generator tuning to 1500kc/s. Adjust oscillator trimmer C10 until signal is obtained. Check as previously by switching off generator momentarily. Repeat the last two operations until scale calibration is correct at both places.

With receiver and generator tuned to 200m (1500kc/s), inject a modulated signal and adjust aerial trimmer C1 for maximum output. Check calibration again and correct if necessary.

**RF LW.** Switch to LW. Tune receiver pointer to 1800m (15 degrees). Inject modulated signal at 166.6kc/s. Tune this signal in on receiver by adjusting trimmer C7. Insulated tool must be used for this adjustment. Adjust LW aerial coil by sliding along ferrite rod for maximum output. Repeat last two operations for maximum performance.

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